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WALLBOARD TAPING MACHINE

Filed Aug. 13, 1953

2 Sheets-Sheet 1

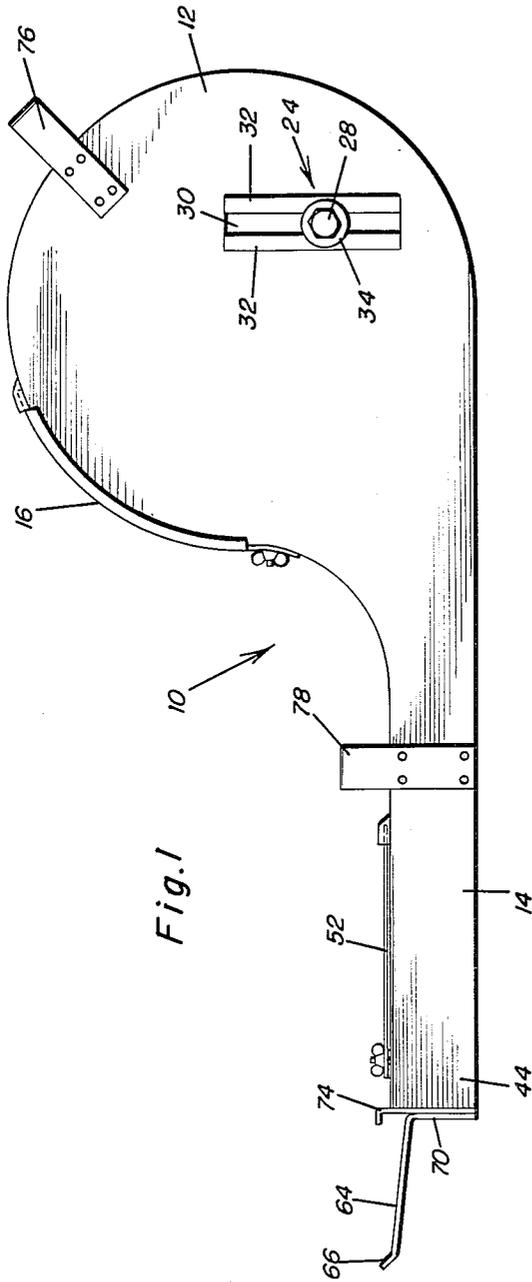


Fig. 1

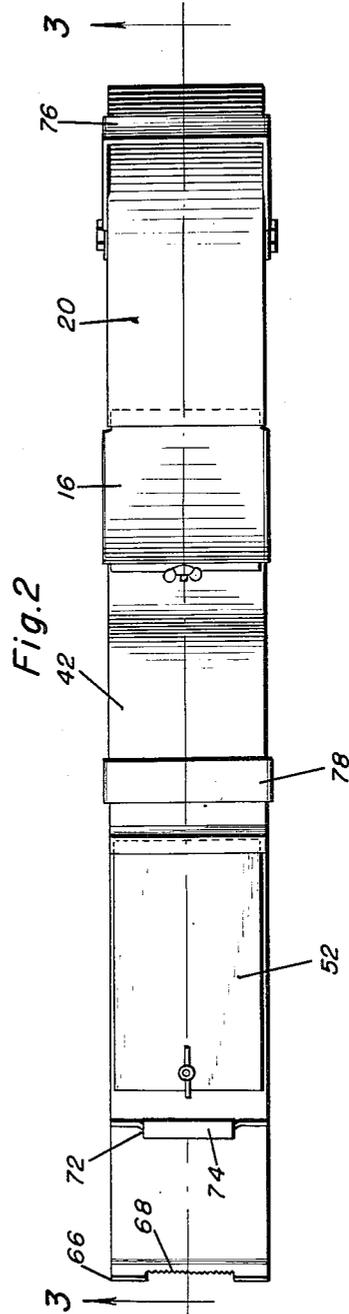


Fig. 2

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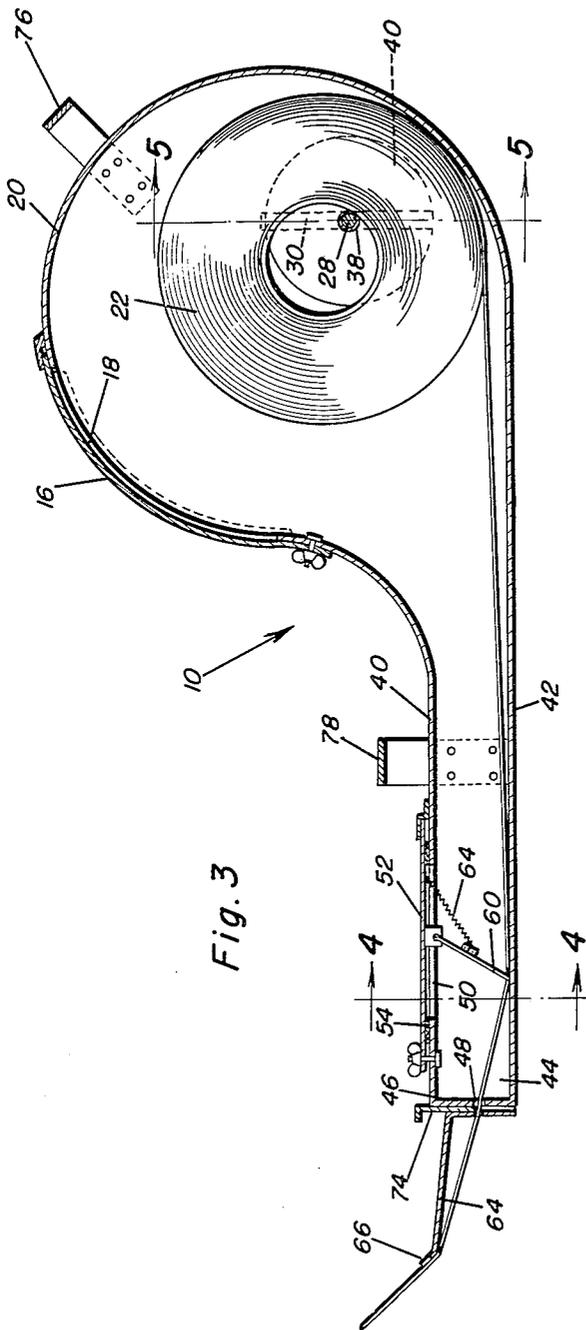


Fig. 3

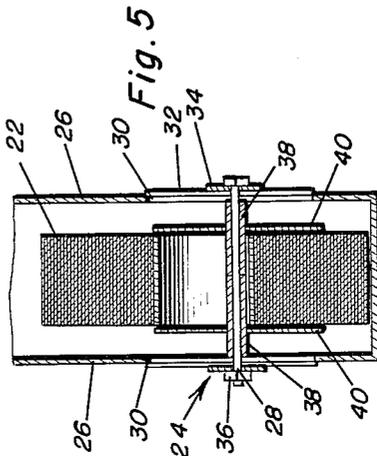


Fig. 5

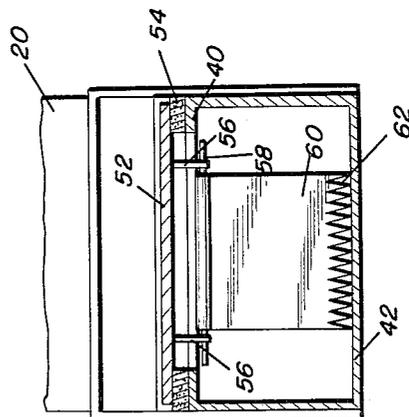


Fig. 4

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WALLBOARD TAPING MACHINE

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6 Claims. (Cl. 118—405)

The present invention relates to taping machines, and more particularly relates to a portable taping machine constructed to apply cement to a building tape while applying the tape to the joint between wallboards and the like utilized particularly in building construction.

The primary object of the invention is to provide a taping tool in which both the tape roll and the adhesive to be applied to the roll as the tape is dispensed from the tool are disposed within a common housing to provide an extremely compact unit that can be easily loaded and unloaded.

Yet another object of the invention is to provide a portable taping machine in which the tape and the joint cement to be applied to the tape are inserted in a common opening in the housing, with means for adjusting the tape roll within the housing to lower the tape roll as the cement is depleted.

A still further object of the invention is to provide a taping machine including a novel dispensing construction, including a means for positively controlling the thickness of the cement deposited on the bottom of the tape as the same is dispensed from the housing.

Another very important object of the invention is to provide a taping machine including a guide means for the tape strip as it is dispensed from the housing which urges the tape strip into contact with the cement within the housing and which prevents withdrawal of the tape strip back into the housing.

A final object of the invention to be mentioned specifically is a taping tool including a novel pressing and cutting means for pressing the tape into engagement with the wallboards and cutting the tape at the end of the joint.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of the taping machine constituting the present invention;

Figure 2 is a top view of the taping machine;

Figure 3 is a cross-sectional view of the taping machine taken substantially along the plane of section line 3—3 of Figure 2;

Figure 4 is an enlarged cross-sectional view of the tape guiding and retaining means, taken substantially along section line 4—4 of Figure 3; and

Figure 5 is a cross-sectional view of the tape roll mounting means taken substantially along section line 5—5 of Figure 3.

The taping machine is designated in its entirety by the numeral 10.

The machine 10 is in the form of an enclosed housing in the form of a drum 12 having a tubular extension 14 extending therefrom. A closure plate 16 conforming to the circumferential curve of the drum 12 removably covers an opening 18 through the side wall 20 of the

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drum. This opening 18 serves as an opening for inserting the roll of tape 22 into the drum.

A mounting means 24 is carried by the side walls 26 of the drum to adjustably mount the tape roll or spool 22 within the drum housing.

The mounting means 24 comprises an elongated bolt 28 extending through the drum and having its ends disposed in vertical slots 30 which are in aligned relation with one another in the end walls 26 of the drum 12. To form the slots 30, tabs 32 are struck out of the material forming the end walls 26 and folded in overlapping relation to the exterior surfaces of these end walls. Thus, the tabs serve as reinforcing portions around the slots to rigidify the mountings of the ends of the bolt 28 to these end walls. Enlarged washers 34 are provided at the head end and at the threaded end of the bolt 28 and upon tightening of the nut 36 on the threaded end of the bolt 28, the washers 38 are drawn tightly against the tabs 32 to hold the bolt in any selected adjusted position.

The interior of the drum is considerably wider than the width of the tape roll, and to center the roll of tape within the drum, a pair of mating sleeves 38 are provided which extend through the central aperture or opening of the tape roll and meet within the roll in end-to-end abutment. Intermediate the ends of each of the mating sleeves 38, an enlarged disk 40 is provided to bear against the side of the roll of tape 22. These flanges or disks 40 form spool guides for the roll of tape 22 and center the same within the drum 12.

To insert the tape, the sleeves 38 are first placed upon the roll 22 with the flanges 40 abutting opposite sides of the tape roll. Then, this assembly is placed within the drum 12 through the opening 18, and the fastener 28 is passed through the sleeves 38 and the fastener 36 secured in place.

The tubular extension 14 is formed simply as an extension of the side wall 20 of the drum 12 which forms the top wall 41 and the bottom wall 42 of the extension. Side walls 44 are provided for the extension and are formed integrally with the drum walls 26. An end wall 46 is formed to close the free end of the tubular extension 14. A slot 48 is formed in the end wall 46 to provide a dispensing orifice through which the end of the tape strip passes.

The top wall 41 of the extension 14 is provided with an opening 50 which is closed by a removable cover 52 suitably sealed around the edges of the opening 50, as at 54.

Thus, when the tape 22 is inserted through the opening 18 in the drum 12, the end of the tape is then brought into the tubular extension 14, the cover 52 removed, and the end of the tape guided through the dispensing orifice 48.

After guiding the end of the tape strip through the dispensing orifice 48, the cover 52 is replaced over the opening 50.

To guide the tape through the extension 14, the undersurface of the cover 15 is provided with a pair of downturned tabs 56 on which is journaled the bar or rod 58. A tape retainer plate 60 is swingably mounted on the rod 58 and has a serrated lower edge 62. The resilient coil spring 64 interconnects an intermediate portion of the retainer plate 60 with the undersurface of the cover 52 to continually bias the plate 60 toward the drum 12 of the housing. As shown, the length of the plate 60 is somewhat greater than the height of the side walls of the extension 14 so that the plate 60 will constantly remain at an upwardly inclined angle from the dispensing orifice 48 in the end wall 46 of the tubular extension 14. Thus, as the tape 22 is pulled through the dispensing orifice, little resistance to this pulling movement is offered by the plate 60, this plate serving only to press

the tape toward the bottom 42 of the tubular extension. However, when the tape is moved to be retracted back into the housing, the serrated edge 62 of the plate 60 contacts the upper surface of the tape and prevents such movement.

Mounted on the end wall 46 of the extension 14 above the dispensing orifice 48 is an outwardly projecting pressing plate 64 which projects outwardly and upwardly away from the end 46 of the taping machine 10. An upwardly angled lip 66 is formed on the end of the pressing plate 64 to press the tape firmly against the wall boards to bridge the joint therebetween. Cut back or notched central edge 68 of the lip 66 cuts the tape by a slight twisting movement of the taping machine 10 when the end of the joint is reached. Legs 79 abut the end wall 46 on opposite sides of the dispensing orifice 48 and at the juncture of the plate 64 to the end wall 46, the same is centrally recessed as at 72 (see Figure 2).

A slide 74 is guidingly received in the recessed portion 72 formed between the edge of the plate 64 and the end wall 46. The slide 74 is vertically movable along the end wall 46 to vary the size of the slot toward dispensing opening 48 for a purpose that will become presently apparent. Suitable detents or other locking means may be provided engaging the slide 74 to the edge of the plate 64 to secure the same in an adjusted position.

Handle 76 is mounted on the upper end of the drum 12 and a second handle 78 is mounted on the tubular extension 14 rearwardly of the cover 42 so that the taping machine 10 may be conveniently carried to dispense tape.

In the operation of the device, after the tape roll 22 is inserted in the opening 18, and the end of the tape drawn through the dispensing orifice 48 so that the tape is in operating position, a quantity of adhesive in the form of joint cement or paste is pounded into the drum 12 through the opening 18 and the cover 16 then replaced. Since the drum housing is considerably larger than the tape roll, the cement may substantially envelop the tape within the tubular extension 14 and the lower portion of the drum. Thus, as the tape is pulled through the dispensing orifice 48, the surfaces thereof will be coated with adhesive by the tension retained on this tape as it passes through the tubular extension by the retaining plate 60. To control the amount of cement that will be subsequently on the tape strip as it is dispensed through the orifice 48, the slide 74 may adjust to scrape the requisite amount off the tape as it passes through the opening 48.

The operation of the tape is most efficient. The operator simply holds the machine by the handles 76 and 78 and moves the taper along the line or joint the length or height of the wall or ceiling while pressing the prepared tape smooth with the presser head 66. At the end of the wall or joint, the operator cuts the tape by giving the taping machine a twist, and he is then ready for the next joint line.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. A taping machine comprising a closed housing for retaining a roll of tape and a quantity of adhesive paste therein, a removable cover on said housing for inserting the tape and paste, mounting means carried by the housing and extending thereinto for rotatably securing the tape within the housing, guide means resiliently mounted within the housing for urging the tape toward the bottom of the housing and guiding the same therethrough, said housing having a dispensing orifice for dispensing the tape therefrom, and an adjustable slide carried by said housing adjacent said dispensing orifice for varying the size of the orifice.

2. A taping machine comprising a closed container including a drum having an elongated, tubular extension thereon, a removable closure on said drum for inserting a roll of tape and a quantity of cement therein, said tubular extension having a closed end with a slot therein for dispensing tape from the housing, guide means within said tubular extension for guiding tape therethrough, an adjustable slide on said extension partially covering said slot to vary the size of the slot.

3. The combination of claim 2 wherein said extension has an opening therein for threading the tape through the dispensing slot, a cover closing said opening.

4. The combination of claim 2 wherein said extension has an opening therein for threading the tape through the dispensing slot, a cover closing said opening, said guide means being resiliently mounted on said cover and including an inclined plate having one edge for engaging the tape.

5. A taping machine comprising a closed container including a drum having an elongated, tubular extension thereon, a removable closure on said drum for inserting a roll of tape and a quantity of cement therein, said tubular extension having a closed end with a slot therein for dispensing tape from the housing, guide means within said tubular extension for guiding tape therethrough.

6. A taping machine comprising a closed container including a drum having an elongated, tubular extension thereon, a removable closure on said drum for inserting a roll of tape and a quantity of cement therein, said tubular extension having a closed end with a slot therein for dispensing tape from the housing, guide means within said tubular extension for guiding tape therethrough, said guide means including a retainer plate having one edge thereof adapted to engage the tape, said plate being swingably suspended within said tubular extension and angularly inclined toward the closed end thereof, the free edge of said plate engaging the tape and preventing movement of the same toward said drum.

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